

## REMARKS

### Status Summary

Claims 1-82 were originally filed with this patent application. Claims 1-45 and 57-64 presently are pending in this application. Claims 1, 3, 4, 8, 9, 12, 16, 19, 23, 27, 28, 30-32, 37, 39-42, 44, 57, 58, 60 and 62 presently stand rejected under 35 U.S.C. § 102. Claims 2, 5, 7, 13-15, 17, 18, 24, 29, 38, 45, 59, 61, 63 and 64 presently stand rejected under 35 U.S.C. § 103(a). Claims 35 and 36 presently stand rejected under 35 U.S.C. § 112. Claims 20-22, 25, 26, 33 and 43 are allowable. Claims 6, 10, 11, and 34 have been withdrawn by the Examiner. Claims 20, 24, and 39 are objected to in light of informalities. Claims 1, 9, 21, 22, 25, 35, 36, and 39 have been amended herein to better clarify and more particularly claim the present subject matter. Claims 8, 15, 20, 23, 24, 27, 28 and 57-64 have been canceled. No new matter has been added. Therefore, claims 1-5, 7, 9, 12-14, 16-19, 21, 22, 25, 26, 29-33, and 35-45 will be pending upon entry of this amendment.

### Election/Restrictions

Applicant acknowledges that claims 6, 10, 11, and 34 were withdrawn by the Examiner as being drawn to nonelected species.

### Claim Objections

Claims 20, 24, and 39 presently stand objected to by the Examiner due to informalities. Claims 20 and 24 have been canceled. Applicant respectfully

Serial No.: 10/692,235

submits that claim 39 has been amended per the Examiner's instructions to be in proper format.

#### Specification Objections

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter in claims 15 and 25. Claim 15 has been canceled. Claim 25 has been amended to recite a capacitor connected to the operational amplifier. Support for this amendment can be found throughout the specification and in particular at page 44, lines 20-22. Applicant respectfully submits that the objections to the specification have been overcome and should now be withdrawn.

#### Claim Rejections – 35 U.S.C. § 112

Claims 35 and 36 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. By amendment, claims 35 and 36 now recite that the signal receiver employs differential recording as described throughout the disclosure. Applicant respectfully submits that the rejection has been overcome and should now be withdrawn.

#### Claim Rejections - 35 U.S.C. § 102

Claims 1, 3, 4, 8, 9, 12, 16, 19, 23, 27, 28, 30-32, 37, 39-42, 44, 57, 58, 60 and 62 presently stand rejected by the Examiner under 35 U.S.C. § 102 as being anticipated by various patents listed in the Official Action. Claims 8, 23, 27, 28, 57, 58, 60, and 62 have been canceled. Claim 1 has been rewritten to include the allowable matter from claim 20 (now canceled) as stated by the Examiner, namely

Serial No.: 10/692,235

a multiplexer and a plurality of operational amplifiers. Thus, applicant respectfully submits that claim 1 is now in condition for allowance. Also, claims 3, 4, 9, 12, 16, 19, 30-32, 37, 39-42, and 44 depend from claim 1 and, as such, are now considered to be in condition for allowance. Applicant respectfully submits that the rejections under 35 U.S.C. § 102 of independent claim 1 and all dependent claims dependent therefrom should be withdrawn.

#### Claim Rejections – 35 U.S.C. § 103

Claims 2, 5, 7, 13-15, 17, 18, 24, 29, 38, 45, 59, 61, 63 and 64 presently stand rejected under 35 U.S.C. § 103(a). Claims 15, 24, 59, 61, 63, and 64 have been canceled. Furthermore, in light of the amendment to independent claim 1 that now recites allowable subject matter from claim 20 (now canceled) as stated by the Examiner, claims 2, 5, 7, 13, 14, 17, 18, 29, 38, and 45 depend therefrom and are now considered to be in condition for allowance. Applicant respectfully submits that the rejections under 35 U.S.C. § 103 of claims depending from independent claim 1 should now be withdrawn.

#### Allowable Subject Matter

Claims 20-22, 25, 26, 33, 35, 36, and 43 are allowable. Claim 20 has been canceled and the claim elements therefrom are now recited in independent claim 1. As such, claims depending from independent claim 1 are now considered to be in condition for allowance. Also, claim 8 has been canceled and the subject matter therefrom is recited in claim 1 to provide antecedent basis for “neural sensors.”

Serial No.: 10/692,235

Claims 35 and 36 have been amended to overcome their 35 U.S.C. § 112, first paragraph rejections and are also considered to be in condition for allowance.

#### CONCLUSION

In light of the above amendments and remarks, it is respectfully submitted that the present application is now in proper condition for allowance, and an early notice to such effect is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Remarks, the Patent Examiner is respectfully requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Official Action.

#### DEPOSIT ACCOUNT

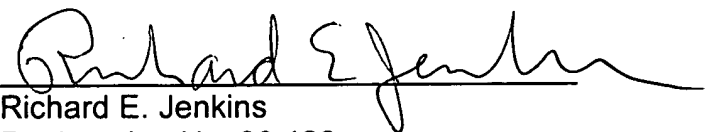
The Commissioner is hereby authorized to charge any fees associated with the filing of this correspondence to Deposit Account No. 50-0426.

Respectfully submitted,

JENKINS, WILSON, TAYLOR & HUNT P.A.

Date: October 9, 2006

By:

  
Richard E. Jenkins  
Registration No. 28,428

Suite 1400 University Tower  
3100 Tower Boulevard  
Durham, North Carolina 27707  
Telephone: (919) 493-8000

180/153 REJ/SCM/gwc